DOCUMENT RESUME

ED 358 928 PS 021 429

AUTHOR Quay, Lorene C.; And Others
TITLE Sex Typing in Stories and Comprehension, Recall, and Sex Typed Beliefs in Preschool Children.
PUB DATE Mar 93
NOTE 11p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (60th, New Orleans, LA, March 25-28, 1993).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Childhood Attitudes; *Comprehension; *Preschool Children; Preschool Education; *Recall (Psychology); *Sex Bias; *Sex Differences; Sex Role; Sex Stereotypes
IDENTIFIERS *Story Content

ABSTRACT

This study investigated effects of two story characteristics on preschool boys' and girls' comprehension and recall of stories and their sex-typed beliefs and attitudes. The two story characteristics were the portrayal of the main character as either a male or female and the engagement of the main character in either male or female sex-stereotyped activity. Subjects, 25 boys and 34 girls between four and six years of age, were read two stories, one about a person in a female sex-stereotyped occupation (a nurse), the other about a person in a male sex-stereotyped occupation (an airline pilot). Each story had two versions, with either a male or female main character. Immediately following the story reading, children were administered a questionnaire to measure comprehension, recall, and sex-typed beliefs about the occupations. To measure recall and stability of attitude, children were administered the same questionnaire one week after the story reading. Results showed that both boys and girls scored higher on comprehension and recall when the main character was a female. For the pilot story, no significant differences were found. For both stories, sex-typed beliefs about occupations were affected differently, depending on the child's sex and the sex of the story's main character. (MM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED358928

Sex Typing in Stories and Comprehension, Recall, and Sex Typed Beliefs in Preschool Children

Lorene C. Quay, Darlene Ann Minore, and Lynda M. Fraizer

Georgia State University

PS 021429

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Darlene Minore
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Paper presented at the meeting of the Society for Research in Child Development, New Orleans, LA, March, 1993.

BEST COPY AVAILABLE

ABSTRACT

Preschool boys and girls were read two stories, one about a person in a female sex-typed occupation (nurse), the other about a person in a male sex-typed occupation (airline pilot). Each story had two versions, one with a male, the other with a female main character. Children were asked questions immediately afterward and one week later to measure their comprehension, recall, and sex-typed beliefs about the occupations. For the nurse story, girls were superior to boys on comprehension and recall. Both boys and girls made higher scores on comprehension and recall when the main character was a female than when the main character was a male. For the pilot story, no significant effects were found. For both stories, sex-typed beliefs about occupations were affected differently depending on the sex of the child listener and the sex of the main character in the story.

The objectives of this research was to investigate the effects of two story characteristics on preschool boys' and girls' (a) comprehension and recall of stories and (b) their sex-typed beliefs and attitudes. The two story characteristics were the portrayal of the main character as either a male or a female and the engagement of the main character in either male or female sex-stereotyped activity.

The first objective relates to the effects of sex typing in reading materials on children's cognitive performance. Although sex typing in materials that children read has been shown to influence their ability to comprehend and recall the content, the specific effects of sex typing on children's comprehension and recall is not clear. Koblinsky, Cruse, and Sugawara (1978) asserted that readers use sex stereotyping as an organizational framework in reading comprehension and that children tend to be more accurate in their recall of stories that fit this framework. However, their finding that traditional sex-role content was superior to nontraditional content was not supported by Frasher and Frasher (1978). They reported that nontraditional sex-role content was superior in facilitating recall. Scott and Schau (1985) found that a match between the sex of the story character and the sex of the reader facilitated reading comprehension and recall. Scott (1986) indicated that the effects of sex typing on reading comprehension and recall was even more complex than the previous research had indicated. She found that involvement of the character in male or female sex-typed activity may interact with the sex of the story character to produce different effects than either variable would produce alone and that the effects are related to the sex and grade level of 4th, 7th, and 11th grade readers. Kropp and Halverson (1983), presented four stories to children. Each story portrayed a male or a female main character engaged in a typically masculine or a typically feminine activity. The results indicated that although girls preferred the story with a female character and a feminine

activity, they had better recall for the story they liked least, the one with a male character and masculine activity. The reverse was found for boys. They preferred a story with a male character and male activity but, like the girls, had better recall for the story they liked least, the one having a female character engaged in feminine activity.

The second objective of this study relates to children's attitudes. One aspect of sex typing involves the idea that it is appropriate for males to engage only in certain activities which traditionally have been masculine (e. g., being an airline pilot) or, conversely, for females to engage in activities which traditionally have been feminine (e. g., being a nurse). Several studies indicate that instructional materials which portray the main character either in traditional sex-typed activity or in nontraditional roles can influence sex-typed beliefs and attitudes in elementary school children and adolescents. Readers of materials in which males and females engage in nontraditional activities express fewer sex-typed responses about occupations, roles, and traits than those who read about people in sex-typed roles (see Scott, 1986).

In addition to children who are old enough to read stories and materials for themselves, young nonreaders may use sex typing as an organizational framework for understanding stories that others read to them. Their beliefs and attitudes may also be affected by the portrayal of males and females in the stories as either traditional or nontraditional. No research has been found which evaluated the influence that stories read to young children, and which portray the main character as engaged in either masculine or feminine activity, have on comprehension, recall, and beliefs. Nor has research been found that compares the effects if such stories for boys and girls.

METHOD

SUBJECTS. Subjects were 59 children, 25 boys and 34 girls, age 4 and 1/2 to 5 and 1/2, who attended a university preschool which serves children of university students. One or both parents worked at least part time.

Procedures. The Bracken Basic Concept Scale, which provides a concept age (CA) and concept IQ score, was administered to each child. To evaluate the children's sex-typed attitudes about occupations, each child was asked "What do you want to be when you grow up?" Three teachers blindly and independently placed the children's responses into one of the following categories: "traditional male occupation," "traditional female occupation," "androgenous occupation." Each child's occupational choice was then assigned to the category agreed upon by two of the raters.

On the basis of previous research indicating that children view the occupation of nurse as female and the occupation of airline pilot as male, two stories having these themes were devised. Each story had two identical versions except that in one version the main character was a male while in the other version the main character was a female. On separate days one version of the each of the stories was read to each child. The order of presentation of the stories and of the male or female versions was counterbalanced.

Immediately following the reading of the story an interviewer administered a questionnaire to the child. To measure comprehension, the child was asked 5 questions about the content of the story (e. g., What was the pilot's name?). To measure sex-typed beliefs about the two occupations, the child was asked the question "Who can be a good nurse (or pilot), a boy, a girl, or both?" To ascertain that the children were not answering randomly, the questionnaire was administered twice. Scores on the two administrations were correlated. Test-retest reliability was .81.

To measure recall and stability of attitude, the children were administered the same questionaires about the content of the story and about their sex-typed beliefs concerning the occupations one week after the first administration.

RESULTS AND CONCLUSIONS

To assure that the two stories did not differ on difficulty, *t*-tests comparing the comprehension and recall scores for the two stories were computed. No significant differences were found. *T*-tests also indicated that there were no significant differences between boys and girls on Bracken CA or IQ. No significant correlations between Bracken CA nor IQ and comprehension or recall scores were found for either of the stories.

To ascertain whether boys and girls differed on their attitude about sex-role stereotypes, responses to the preliminary question "What do you want to be when you grow up?" was analyzed by means of a sex of child by sex type of occupation (male traditional, female traditional, or androgeneous) chi square. The chi square, 15.96 (2), $p = .001$, indicated that significantly more girls gave female sex-typed and significantly more boys gave male sex-typed responses than expected.

To ascertain whether sex of character affected comprehension for boys and girls, a 2 (sex of listener) x 2 (sex of story character) MANOVA was computed for each story. The dependent variables were the comprehension scores obtained immediately after the story was read and recall scores obtained a week later. Tables 1 and 2 present the means and standard deviations for the comprehension and recall scores on the nurse story. For this story, the main effects and the interaction were significant. The univariate tests indicated that the comprehension scores were higher for the female version than for the male version, $F\ (1, 57) = 9.02$, $p < .05$, and higher for girls than for boys, $F\ (1,57) = 12.17$, $p < .05$. The univariate interaction was not significant. These results indicate that the

comprehension of both boys and girls was superior when the nurse was a female than when the nurse was a male and that girls were superior to boys on comprehension of this story, regardless of the sex of the nurse. For recall, the main effects were not significant, but a significant interaction occurred, F (1, 57) = 4.87. p = .03. Means indicated that girls had higher recall scores when the main character was a female, and boys had higher scores when the main character was a male. For the pilot story, the MANOVA results were not significant for either the main effects or the interaction.

To evaluate the effect of the stories on a sex-typed beliefabout occupations two loglinear analyses, one for each story, were computed. Each analysis had four dimensions: (a) the question "who can be a good nurse [N1] or pilot [P1], a boy, a girl, or both?" asked immediately after the story, (b) the same question asked one week later [N2] and [P2], (c) the sex of the main character in the story [SOC], and (d) the sex of child to whom the story was read [SEX].

For the nurse story, the best fitting model was the [N2* SOC*SEX] interaction with a likelihood chi-square ratio, or G, of 21.51 (df = 30), p > .49. The best fitting model for the pilot story was the same interaction as that of the nurse story, [P2*SOC*SEX]. The likelihood chi-square ratio, or G, was .90, (df = 6), p > .99. These results indicate that one week after hearing the stories, the children were most likely to indicate that a person of their same sex could be a good nurse or pilot if they heard the story in which the main character was their own sex, regarless of whether the character was in a traditional or nontraditional role.

References

Frasher, R. S., & Frasher, J. M. (1978). Influence of story characters' roles on comprehension. Reading Teacher, 32, 160-164.

Koblinsky, S. G., Cruse, D. G., & Sugawara, A. I. (1978). Sex role stereotypes and children's memory for story content. Child Development, 49, 452-458.

Kropp, J. J., & Halverson, C. (1983). Preschool children's preference and recall for sex-appropriate and sex-inappropriate stories. Sex Roles, 9, 261-272.

Scott, K. P. (1986). Effects of sex-fair reading materials on pupils' attitudes, comprehension, and interest. American Educational Research Journal, 23, 105-116.

Scott, K. P., & Shau, C. G. (1985). Sex equity and sex bias in instructional materials. In S. S. Klein (Ed.), Handbook for achieving sex equity through education (pp. 218-232), Baltimore, MD: John Hopkins University Press.

Shau, C. G., & Scott, K. P. (1984). Impact of gender characteristics of instructional material: An intergration of research literature. Journal of Educational Psychology, 76, 183-193.

TABLE 1

M's and SD's of Comprehension Scores for the Nurse Story

Sex of Character	Sex of Child: Boy	Sex of Child: Girl
Male	3.38 (1.58)	3.46 (1.64)
Female	3.83 (1.58)	4.80 (1.65)

TABLE 2

M's and SD's of Recall

Scores for the Nurse Story

Sex of Character	Sex of Child: Boy	Sex of Child: Girl
Male	1.31	1.14
	(.63)	(.53)
Female	1.08	1.63
	(.79)	(.50)